

Comparison of antibiotic beads and intravenous antibiotics in open fractures.

Moehring HD, Gravel C, Chapman MW, Olson SA.

University of California, Davis Medical Center, Sacramento, USA.

This study compared the efficacy of antibiotic impregnated beads with conventional intravenous antibiotics in the treatment of open fractures. A randomized prospective study was designed and conducted during a 29-month period. Sixty-seven patients with 75 open fractures were treated similarly, with the exception of the method of antibiotic administration, and were followed up for at least 1 year after injury. Infection occurred in two of 24 (8.3%) fractures treated with antibiotic beads alone and in two of 38 (5.3%) fractures treated with conventional intravenous antibiotics. In an unanticipated nonrandomized third cohort group, patients received antibiotic beads and intravenous antibiotics administered for nonorthopaedic reasons or limb threatening injury, or both. Two of 13 (15.4%) fractures in this high risk group became infected. Infection ultimately resolved in all fractures treated with antibiotic beads alone or antibiotic beads in conjunction with conventional intravenous antibiotics. This study was unable to achieve statistical significance; however, the data suggest antibiotic beads may be useful in preventing infection in open fractures. Thus, a larger multicenter randomized prospective study of isolated open fractures, eliminating other variables, is justified.

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- Clinical Trial
- Randomized Controlled Trial

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